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Professional Positions

Research Meteorologist NOAA ESRL PSD	2015 – Present Boulder, CO
Assistant Researcher II University of California Santa Barbara	2014 – 2015 Santa Barbara, CA
Research Specialist II University of California Santa Barbara	2012 – 2013 Santa Barbara, CA

Education

Ph.D. in Marine Science University of Massachusetts Lowell	February 2012
M.S. in Marine Science University of Massachusetts Lowell	February 2010
M.S. in Atmospheric Science University of Massachusetts Lowell	June 2007
B.S. in Meteorology University of Massachusetts Lowell	June 2005

Peer-Reviewed Journal Articles

1. **Hoell, A.**, M. Hoerling, J. Eischeid, K. Wolter, R. Dole, J. Perlwitz, T. Xu and L. Cheng, 2015: Does El Niño Intensity Matter for California Precipitation?, Geophysical Research Letters, doi: 10.1002/2015GL067102
2. Funk, C., P. Peterson, M. Landsfeld, D. Pedreros, J. Verdin, S. Shukla, G. Husak, J. Rowland, L. Harrison, **A. Hoell** and J. Michaelsen, 2015: The Climate Hazards Infrared Precipitation with Stations – A New Environmental Record for Monitoring Extremes, Scientific Data, doi: 10.1038/sdata.2015.66
3. Barlow, M. and **A. Hoell**, 2015: Drought in the Middle East and Central-Southwest Asia During Winter 2013/2014 [in “Explaining Extreme Events of 2014 from a Climate Perspective”] Bulletin of the American Meteorological Society
4. Funk, C., S. Shukla, **A. Hoell**, B. Livneh, 2015: Assessing the Contributions of East African and West Pacific Warming to the 2014 Boreal Spring East African Drought [in

- “Explaining Extreme Events of 2014 from a Climate Perspective”] Bulletin of the American Meteorological Society
5. Zinke, J., **A. Hoell**, J.M. Lough, M. Feng, A.J. Kuret, H. Clarke, V. Ricca, K. Rankenburg and T. McCullouch, 2015: Coral record of southeast Indian Ocean marine heat waves with intensified western Pacific temperature gradient, *Nature Communications*, doi: 10.1038/ncomms9562
 6. **Hoell, A.**, S. Shukla, M. Barlow, F. Cannon, C. Funk, C. Kelley, 2015: The Forcing of Monthly Precipitation Variability over Southwest Asia During the Boreal Cold Season, *Journal of Climate*, doi: 10.1175/JCLI-D-14-00757
 7. Gaughan, A.E., C. G. Staub, **A. Hoell**, A. Weaver, P. R. Waylen, 2015: Inter- and Intra-annual Precipitation Variability and Associated Relationships to ENSO and the IOD in southern Africa, *International Journal of Climatology*, doi: 10.1002/joc.4448
 8. Barlow, M., B. Zaitchik, S. Paz, E. Black, J. Evans, **A. Hoell**, 2015: A Review of Drought in the Middle East and Southwest Asia, *Journal of Climate*, doi: 10.1175/JCLI-D-13-00692
 9. Funk, C. and **A. Hoell**, 2015: The Leading Mode of Observed and CMIP5 ENSO-residual Sea Surface Temperatures and Associated Changes in Indo-Pacific Climate, *Journal of Climate*, doi: 10.1175/JCLI-D-13-00334
 10. **Hoell, A.**, C. Funk, M. Barlow, 2014: The Forcing of Southwest Asia Teleconnections by Low Frequency Sea Surface Temperature Variability During Boreal Winter, *Journal of Climate*, doi: 10.1175/JCLI-D-14-00344.1
 11. Funk, C., **A. Hoell**, S. Shukla, I. Blade, B. Liebmann, J.B. Roberts, F.R. Robertson and G. Husak, 2014: Predicting East African Spring Droughts Using Pacific and Indian Ocean Sea Surface Temperature Indices, *Hydrology and Earth System Sciences Discussion*, doi: 10.5194/hess-18-4965-2014
 12. **Hoell, A.**, C. Funk, T. Magadzire, G. Husak and J. Zinke, 2014: El Niño Southern Oscillation Diversity and Southern Africa Teleconnections During Austral Summer, *Climate Dynamics*, doi: 10.1007/s00382-014-2414-z
 13. Shukla, S., C. Funk and **A. Hoell**, 2014: Using Constructed Analogs to Improve the Skill of National Multi-Model Ensemble March-April-May Precipitation Forecasts in Equatorial East Africa, *Environmental Research Letters*, 9, doi:10.1088/1748-9326/9/9/094009
 14. Funk, C., **A. Hoell**, D. Stone, 2014: Examining the Contribution of the Observed Global Warming Trend to the California Droughts of 2012/13 and 2013/14 [in “Explaining Extreme Events of 2013 from a Climate Perspective”] *Bulletin of the American Meteorological Society*
 15. **Hoell, A.**, M. Barlow, M. Wheeler and C. Funk, 2014: Disruptions of El Niño Southern Oscillation Teleconnections by the Madden Julian Oscillation, *Geophysical Research Letters*, 41, doi: 10.1002/2013GL058648
 16. **Hoell, A.**, C. Funk and M. Barlow, 2014: La Niña Diversity and Northwest Indian Ocean Rim Teleconnections, *Climate Dynamics*, 43, 2707-2724, doi: 10.1007/s00382-014-2083-y
 17. **Hoell A.** and C. Funk, 2014: Indo-Pacific Sea Surface Temperature Influences on Failed Consecutive Rainy Seasons over Eastern Africa, *Climate Dynamics*, 43, 1645-1660, doi: 10.1007/s00382-013-1991-6
 18. Funk, C., G. Husak, J. Michaelson, S. Shukla, **A. Hoell**, B. Lyon, M.P. Hoerling, B. Liebmann, T. Zhang, J. Verdin, G. Galu, G. Eilerts, J. Rowland, 2013: Attribution of 2012 and 2012-2013 Rainfall Deficits in Eastern Kenya and Southern Somalia [in

- “Explaining Extreme Events of 2012 from a Climate Perspective”] Bulletin of the American Meteorological Society 94(9), S45-S48.
19. Saini, R., M. Barlow and **A. Hoell**, 2013: Is the North American Monsoon self-limiting?, Geophysical Research Letters, 40, 4442-4447, doi: 10.1002/grl.50801
 20. **Hoell, A.** and C. Funk, 2013: The ENSO-related West Pacific Sea Surface Temperature Gradient, Journal of Climate, 26, 9545-9562, doi: 10.1175/JCLI-D-12-00344.1
 21. **Hoell, A.**, C. Funk and M. Barlow, 2013: The Regional Forcing of Northern Hemisphere Drought During Recent Warm Tropical West Pacific Ocean La Niña Events, Climate Dynamics, doi:10.1007/s00382-013-1799-4
 22. **Hoell, A.**, M. Barlow and R. Saini, 2013: Intraseasonal and Seasonal-to-Interannual Indian Ocean Convection and Hemispheric Teleconnections. Journal of Climate, 26, 8850-8867, doi:10.1175/JCLI-D-12-00306.1
 23. **Hoell, A.**, M. Barlow and R. Saini, 2012: The Leading Pattern of Intraseasonal and Interannual Indian Ocean Precipitation Variability and Its Relationship with Asian Circulation during the Boreal Cold Season, Journal of Climate, 25, 7509-7526, doi:10.1175/JCLI-D-11-00572.1
 24. Saini, R., M. Barlow and **A. Hoell**, 2011: Dynamics and Thermodynamics of the Regional Response to the Indian Monsoon Onset. Journal of Climate, 24, 5879-5886, doi:10.1175-2011JCLI3928.1
 25. Funk, C., M. D. Dettinger, J. C. Michaelsen, J. P. Verdin, M. E. Brown, M. Barlow and **A. Hoell**, 2008: Warming of the Indian Ocean threatens eastern and southern African food security but could be mitigated by agricultural development. PNAS, 105, 11081-11086. doi: 10.1073/pnas.0708196105
 26. Barlow, M., **A. Hoell** and F. Colby, 2007: Examining the wintertime response to tropical convection over the Indian Ocean by modifying convective heating in a full atmospheric model, Geophysical Research Letters, 34, L19702, doi:10.1029/2007GL30043

Peer-Reviewed Book Chapters

1. **Hoell, A.**, C. Funk, M. Barlow and F. Cannon, 2015: The Blueprint for Extreme Drought Over Southwest Asia, [in “Climate Extremes: Patterns and Mechanisms”], AGU Monograph, Eds. S.-Y. Wang, Jin-Ho Yoon, Chris Funk and R.R. Gillies
2. Funk, C. and **A. Hoell**, 2015: Recent Climate Extremes Associated with the West Pacific Warming Mode, [in “Climate Extremes: Patterns and Mechanisms”], AGU Monograph, Eds. S.-Y. Wang, Jin-Ho Yoon, Chris Funk and R.R. Gillies
3. **Hoell, A.**, C. Funk, M. Barlow and S. Shukla, 2015: Recent and Possible Future Variations in the North American Monsoon, [in “The Monsoons and Climate Change: observations and modeling”], Springer, Eds. L. Carvahlo and C. Jones.

Climate Services and Transitioning

Famine Early Warning Systems Network (FEWS NET)

2012 – Present

- Lead FEWS NET monthly forecasting activities to support food security analysts, government representatives, stakeholders and regional scientists

- Develop climate training courses and lead agro-climatology workshops for FEWS NET personnel
- Prepare alert documents warning of potential adverse climate impacts
- Brief food security analysts on the state of regional climates

National Oceanic and Atmospheric Administration

- Brief National Weather Service Western Region on the Potential Effects of a Strong El Niño on Seasonal Weather and Climate During 2015-2016 December 2015
- Assist in the preparation of 'Seasonal Precipitation Forecast Improvement Project White Paper' for the Western States Water Council October 2015